

09/802,982
In re KARL

REMARKS

The Examiner is thanked for the Official Action dated February 14, 2002 and the indication of allowable subject matter in this application. The above amendment and remarks to follow are intended to be fully responsive to the issues presented in that Action.

The Examiner has requested translations of two prior art documents cited on the French Search Report disclosed to the examiner in the IDS filed along with this application. No English-language version of these documents exists; however, applicant submits that the drawings provided as part of these two prior art documents provides sufficient disclosure of the materiality of the cited prior art. Regarding the "Background of the Invention, applicant believes that the written description provided as part of this application is sufficient to convey the disclosure and drawbacks of the prior art systems. If the Examiner needs specific clarification of any prior art system, applicant will certainly provide any information requested by the examiner. However, at the present time it is submitted that the original disclosure is sufficient.

Claim 12 was rejected under 35 USC 112, second paragraph, for indefinite claim language. Applicant has amended claim 12 to address the deficiencies noted by the Examiner in the Official Action and claim 12 has been rewritten into independent form. Amended claim 12 is believed to recite the invention in compliance with 35 USC 112 and in accordance with the Examiner's comments. No new matter has been entered. It is further submitted that amended claim 12 is in condition for allowance as indicated by the examiner.

Claims 1, 2, 10, 11, 13 and 14 were rejected under 35 U.S.C. 103(a) as being

09/802,982

In re KARL

unpatentable over JA 10-76837 in view of Enomoto (USP 5,291,941). Claims 4-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over JA '837 in view of Enomoto '941 and Whalen (USP 3,910,345)/Momose (USP JP 59-241234). Claims 8 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over JA '837 in view of Enomoto '941 and Echigoya (USP 5,971,290). These rejections are respectfully traversed in view of the above amendments and the following remarks.

Claim 1 has been amended to describe the control means in the forms of valves that control the quantity of heat-carrying fluid that passes through the evaporator and condenser. As described in the original application, valves (26, 27 & 30, 31) control the quantity of heat-carrying fluid which passes through the evaporator and through the condenser, whereby the valves 27 and 31 are open when the valves 26 and 30 are closed and vice versa. (see page 12, lines 30-32 of specification).

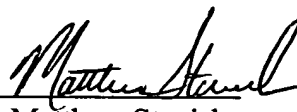
Neither Whalen '345 nor Momose '234 disclose the arrangement of amended claim 1. Indeed, in Whalen '345 "the bypass valves 56, 58 are employed so that certain quantities of returning chilled water and hot water, which are at different temperatures than those produced in the chiller 10 and heater 12, may bypass the chiller and heater 12 ..." see col. 7, lines 5-10 of Whalen '345. Consequently, valves 56, 58 of Whalen '345 do not anticipate the structure/function of the valves recited in amended claim 1.

Applicant also notes an error in original claim 1 and the Summary of the Invention which has been corrected by the above amendment. Support for the subject matter of this correction can be found at page 10, lines 15-20.

09/802,982
In re KARL

It is respectfully submitted that this application is in condition for allowance and notice to that effect is earnestly solicited. Should the Examiner believe additional discussion would advance the prosecution of the instant application, he is invited to contact the undersigned.

Respectfully submitted:
Liniak, Berenato, Longacre & White

By: 
Matthew Stavish
Reg. No. 36,286

Suite 240
6550 Rock Spring Drive
Bethesda, MD 20817
301-896-0600

APPENDIX OF AMENDMENTS

IN THE SPECIFICATION

Please amend the specification at page 4, lines 2-24 as follows:

To that end, the device of the invention includes a device for heating and/or air conditioning the passenger compartment of a motor vehicle, comprising an engine-cooling loop in which a heat-carrying fluid circulates for taking up heat from the engine and returning the heat to an air heater; a heat-pump loop in which a refrigerant fluid circulates, this loop containing a compressor, an evaporator constituting a cold source of the heat pump at which the refrigerant fluid takes up heat from the surroundings, and a condenser constituting a hot source of the heat pump at which the refrigerant fluid gives up heat, the condenser being integrated into the engine-cooling loop upstream of the air heater, the device further comprising an air-conditioning branch containing a condenser and an evaporator, the air-conditioning branch an upstream end connected to the heat-pump loop downstream of the compressor, and a downstream end connected to the heat-pump loop upstream of the compressor, and a switching device making it possible to make the refrigerant fluid circulate either in the [heat-pump] air-conditioning loop, or in the heat-pump branch, in such a way as to form a heat-pump loop.

IN THE CLAIMS

Please delete claims 4-7.

Please amend claims 1 and 12 as follows.

1. (Amended) A device for heating and/or air conditioning the passenger compartment of a motor vehicle, comprising an engine-cooling loop in which a heat-carrying fluid circulates for taking up heat from the engine and returning the heat to an air heater; a heat-pump loop in which a refrigerant fluid circulates, this loop containing a compressor, an evaporator constituting a cold source of the heat pump at which the refrigerant fluid takes up heat from the surroundings, and a condenser constituting a hot source of the heat pump at which the refrigerant fluid gives up heat, the condenser being integrated into the engine-cooling loop upstream of the air heater, the device further comprising an air-conditioning branch containing a condenser and an evaporator, the air-conditioning branch an upstream end connected to the heat-pump loop downstream of the compressor, and a downstream end connected to the heat-pump loop upstream of the compressor, and a switching device making it possible to make the refrigerant fluid circulate either in the [heat-pump] air-conditioning loop, or in the heat-pump branch, is such a way as to form a heat-pump loop,

wherein the cooling loop includes control means including at least one valve to control the quantity of heat-carrying fluid which passes through the evaporator and the condenser.

12. (Amended) A [The] device [of claim 1, and] for heating and/or air conditioning the passenger compartment of a motor vehicle, comprising an engine-cooling loop in which a heat-carrying fluid circulates for taking up heat from the engine and returning the heat to an air heater; a heat-pump loop in which a refrigerant fluid circulates, this loop containing a compressor, an evaporator constituting a cold source of the heat pump at which the refrigerant fluid takes up heat from the surroundings, and a condenser constituting a hot source of the heat pump at which the refrigerant fluid gives up heat, the condenser being integrated into the engine-cooling loop upstream of the air heater, the device further comprising an air-conditioning branch containing a condenser and an evaporator, the air-conditioning branch an upstream end connected to the heat-pump loop downstream of the compressor, and a downstream end connected to the heat-pump loop upstream of the compressor, and a switching device making it possible to make the refrigerant fluid circulate either in the air-conditioning loop, or in the heat-pump branch, is such a way as to form a heat-pump loop, and

further comprising a modular casing containing the evaporator, control means of the evaporator for controlling the quantity of heat-carrying fluid which passes through the evaporator, [the] an anti-return valve upstream of the evaporator, the condenser, [the] control means of the condenser for controlling the quantity of heat-carrying fluid which passes through the condenser, the switching [means] device and [the] a pressure-reduction means of the heat-pump loop for reducing the pressure of the refrigerant fluid between the condenser and the evaporator.